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Agricultural Memorandum No 793

Water Balance Sample Stations - annual averages

L P Smith

The attached tables give the annual averages for the sample stations used in preparation of the formulae contained in Ag Mems 781 and 783, including

Rainfall
Potential Transpiration
Excess Winter Rain (all in mm)
Return to Capacity Date

For excess winter rains over 500 mm, averages are quoted to the nearest 5 mm. Average return dates cannot be given for some high rainfall stations, as in some years, there is no precise date separating the end of spring drainage and the start of autumn drainage, and in wet years the monthly rain will always exceed the monthly transpiration.

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Area	Station	Annual Averages R	Annual Averages PT	Average Return Date	Average Excess Winter Rain
1A	Seahouses	623	459	Nov 10	191
1B	Boulmer	635	464	Nov 9	200
2	Redesdale	991	391	Aug 31	540
	Kielder Castle	1288	438	Aug 20	785
3	Carlisle	871	469	Sep 27	372
	Sellafield	1084	432	Sep 3	600
4	Haydon Bridge	749	472	Oct 14	286
5	Durham	650	453	Nov 3	215
	Leeming	611	474	Nov 16	175
6	Newton Rigg	930	425	Sep 13	460
	Moor House	2009	310	-	1555
	Malham Tarn	1485	359	July 20	1030
	Grizedale	1914	449	July 10	1365
7	Silpho Moor	881	428	Sep 17	411
	Pickering	681	475	Oct 31	231
8	Cartmel	1156	508	Sep 16	610
	Kirkham	942	511	Oct 2	409
	Nelson	1138	470	Sep 8	620
9	Speke	784	540	Oct 22	288
	Squires Gate	862	543	Oct 15	349
10	Huddersfield, Oakes	1002	431	Sep 9	520
	Buxton	1284	409	Aug 14	800
11	Ilkley	950	486	Sep 25	434
	Bradford	867	475	Sep 29	380
	Sheffield	802	476	Oct 3	327
12	Askham Bryan	623	489	Nov 17	179
	Harrogate	757	479	Oct 14	290
13	High Mowthorpe	771	448	Oct 4	313
	Hull	645	499	Nov 14	193
14	Hawarden Bridge	706	520	Nov 12	233
	Ringway	819	499	Oct 13	332
15A	Stone	736	493	Oct 28	268
15B	Morley	704	489	Nov 4	244
16	Finningley	578	527	Dec 14	128
	Sutton Bonington	611	515	Dec 3	159
	Warsop	613	516	Dec 3	161
17A	Wittering	590	508	Dec 6	145
	Cranwell	590	511	Dec 7	144
17B	Binbrook	713	491	Nov 7	250
	Skegness	596	521	Dec 5	145
18A	Shawbury	670	513	Nov 18	207
	Oswestry	889	483	Oct 3	379
18B	Stoke St Mil.	856	487	Oct 7	366
19	Penkridge	689	503	Nov 11	226
	Hampton Loade	686	513	Nov 15	220
20	Elmdon	681	501	Nov 13	221
	Walsall	740	482	Oct 24	275
21	Wellesbourne	599	519	Dec 7	148
	Pershore	595	522	Dec 8	144
22A	Newtown Linford	675	493	Nov 12	219
	Bugbrooke	611	508	Dec 1	162
22B	Raunds	593	518	Dec 8	144
	Caldecott	563	519	Dec 15	119

Area	Station	Annual Averages R	PT	Average Return Date	Average Excess Winter Rain
23	Terrington	577	531	Dec 11	126
24	Marham	620	533	Dec 1	159
	Lowestoft	602	532	Dec 5	145
	Cromer	631	524	Nov 28	172
25A	Rosemaund	670	514	Nov 19	207
	Malvern	747	520	Nov 2	266
25B	Usk	1030	533	Oct 2	476
	Crumbland	1032	467	Sep 23	525
26	Little Rissington	742	477	Oct 22	279
	Brize Norton	724	519	Nov 7	248
27	Aylesbury	627	514	Nov 29	172
	Hurley	697	530	Nov 16	222
28	NIAB	553	532	Dec 15	106
	Silsoe	539	522	Dec 17	99
29	Stansted	621	520	Nov 30	165
	Honington	589	535	Dec 8	134
	Wattisham	590	523	Dec 6	139
30	Long Ashton	876	526	Oct 15	367
	Lyneham	713	498	Nov 5	247
	Cheltenham	665	522	Nov 22	200
31A	Benson	607	528	Nov 29	151
31B	Leckford	803	509	Oct 29	315
	Long Sutton	795	501	Oct 28	312
32	Wisley	648	538	Nov 24	180
	Shinfield	640	530	Nov 24	177
33A	Rothamsted	697	512	Nov 14	229
33B	Writtle	569	541	Dec 15	115
	Clacton	573	547	Dec 15	116
34	Gillingham	611	558	Dec 5	142
	Faversham	671	545	Nov 21	196
35	Cannington	737	545	Nov 11	248
	Cheldon Barton	1016	505	Oct 6	483
36	Boscombe Down	724	505	Nov 9	254
	Marlborough	822	510	Oct 23	330
37A	N Heath	754	544	Nov 8	262
37B	Worthing	711	564	Nov 17	220
38A	Bodiam	815	548	Oct 30	310
	Edenbridge	762	544	Nov 7	269
	E Hoathly	773	543	Nov 5	278
38B	Eastbourne	794	565	Nov 4	286
	Plumpton	1016	544	Oct 10	455
39A	E Malling	671	545	Nov 21	196
	Wye	739	589	Nov 10	252
39B	Manston	605	564	Dec 3	135
	Folkestone	670	566	Nov 23	187
40	Rosewarne	1044	537	Oct 6	486
	Falmouth	1098	545	Sep 27	530
41	Hartland Pt	866	515	Oct 13	363
42	Ellbridge	1153	534	Sep 18	590
	Bastreet	1706	483	Jul 12	1145
43A	Newton Abbot	1006	512	Sep 28	468
	Princetown	2136	414	-	1600
43B	Slapton	1065	542	Oct 5	500
	Starcross	812	548	Oct 26	307
44	Ilfracombe	1047	532	Sep 29	493
	Hawkridge	1526	442	Jul 20	1525

Area	Station	Annual Averages R	PT	Average Return Date	Average Excess Winter Rain
45A	Exeter	774	557	Nov 7	273
45B	Winfrith	876	537	Oct 23	363
	Shaftesbury	868	377	Oct 19	377
46	Efford	782	552	Nov 5	282
	Southampton	787	555	Nov 4	284
	Littlehampton	730	555	Nov 13	239
47	Valley	871	532	Oct 17	361
	Botwnnog	1099	524	Sep 27	545
48A	Bala	1262	476	-	735
	Trawsfynydd	2082	467	-	1465
	Ceinws	2114	506	-	1515
48B	Cwmystwyth	1743	447	-	1205
	Moel Cynnedd	2286	430	-	1730
49A	Ruthin	765	511	Oct 26	284
	Corwen	1051	491	Sep 25	525
49B	Brecon	1092	491	Sep 20	565
	Llandrindod Wells	1026	465	Sep 25	520
	Cenarth Mill	1219	451	Sep 5	710
50	Milford Haven	995	533	Oct 7	443
	Carmarthen	1267	545	Sep 15	690
	Trawscoed	1165	531	Sep 25	605
51	Llwynon	1690	466	-	1145
	Brynammon	1600	490	-	1040
52	Rhoose	647 ~~647~~	521	Nov 20	186
IOW	Shanklin	917	580	Oct 25	379

Any comments or suggestions on this paper should be referred to the author.

Meteorological Office
Bracknell

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